

# HELSINKI CORRIDORS – WAYS OF EUROPEAN EXPANSION AND DEVELOPMENT

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## *Abstract:*

*Efficient distribution of human and goods transport has always been an important element in maintaining the economic systems cohesion. Together with the economic and technological development, the purposes to attain this goal have considerably evolved. The integration of the Centre, Eastern and South-Eastern European countries' infrastructure in the European transport networks has as a main goal the promotion of networks' interconnection and interoperability. This is done through concentrating upon some specific infrastructure routes located on the trajectory of 10 pan-European transport corridors, which pass through geographical zones in many countries, some of them EU members, and others undergoing a process of negotiation (Turkey). Pan-European Corridors will have immediate effects like: the growth of investments in infrastructure thanks to European funds – for developing countries, this will represent an important part as it welcomes a development of the economy, especially in crises; the favoring of conditions for the functioning and administration of globalization; the growth of cooperation both among Eastern countries and between such countries and Western countries; conditions for the recovery of economic differences between West and East; conditions for the recovery of the development in accordance with the policy of European countries and other candidate countries.*

*Keywords: corridor, transport, connections, efficiency, sector*

## **Introduction**

A new geopolitical situation — and a new situation for the transport sector — was created when the European Union enlarged with 10 countries of central and eastern Europe and the Mediterranean in May 2004. This historic enlargement eastwards and southwards was continued as Bulgaria and Romania joined the EU in January 2007.

The newly enlarged EU-27 not only has more Member States, it has a new set of external frontiers and a new set of neighbours on its borders. Some of the surrounding countries — Croatia, the Former Yugoslav Republic of Macedonia, and Turkey — have been

formally named candidates for EU membership. The other countries from the western Balkans — Albania, Bosnia and Herzegovina, Montenegro, and Serbia/Kosovo are seen as potential candidates.

Transport is a key element in the EU's cooperation with neighbouring countries and its efforts to promote the conditions for sustainable economic growth, trade and cultural exchange. Transport is also one of the areas where the EU works to facilitate the spread of its own internal market principles and rules abroad. Under enlargement policy, candidate countries have to align themselves with EU legislation on transport in the interests

of a well-functioning internal market, while ENP aims to ensure that legislation, standards and technical specifications of main trade partners are compatible with those of the EU. In the transport sector the action plans concentrate on measures designed to improve the safety, security and efficiency of transport operations as well as the development of an efficient transport network.

Closer cooperation in transport fosters economic development and trade. This in turn can contribute to wider aims: transport can have an important enabling role in strengthening regional cooperation and integration across borders.

## HELSINKI CORRIDORS

### *Brief History*

Several Conferences on Pan-European Transportation were organized at beginnings of 1990's as a consequence of the openness of Eastern block. Their objective was the identification of the needs for transportation infrastructure development within Eastern Europe.

The concept of Pan-European transport policy and corridors was born during the preparatory work for the First Pan-European Transport Conference organized by the European Union (Commission, Parliament) and the European Conference of the Ministries of Transport (ECMT) in 1991 in Prague. The purpose was to ***speed up the development of transport routes throughout Europe and to further***

***contribute to smoother economic exchanges.*** With the enlargement process becoming a priority in Europe, the corridor concept started gaining ground. The Corridors were defined in their actual form by the 3rd Pan-European Transport Conference in Helsinki, 1997.

Nine Pan-European transport corridors were defined at the second Pan-European transport Conference in Crete, March 1994, as routes in Central and Eastern Europe that required major investment over the next ten to fifteen years.

But, on third Conference, hosted by Helsinki in 1997, a tenth corridor was added, as a result of the lobby done by Baltic countries for a better connection between Western Europe and Balkans. This corridor was proposed after the end of hostilities between the states of the former Yugoslavia.

Therefore, these corridors are sometimes referred to as the "Crete corridors" or "Helsinki corridors", regardless of their geographical locations.

### *Description of Pan-European Corridors and Areas*

Each corridor has a road and railroad component, except Corridor VII, which is represented by the Danube segment downstream from Vienna. The corridors create a network which extends from West (Nuremberg) to East (Nizhny Novgorod) and from North (Helsinki) to South (Thessaloniki), please see Table 1.

**Table 1**

**Description of Pan-European Corridors**

Corridor	Countries	Connections	Mode s	Lenght
I	Finland, Estonia, Latvia, Lithuania, Poland, Russia	(North-South) Helsinki - Tallinn - Riga - Kaunas and Klaipėda - Warsaw and Gdańsk  Branch A (Via/Rail Hanseatica) - St. Petersburg to Riga to Kaliningrad to Gdańsk to Lübeck; Branch B (Via	rail, road, ferry	1710 km of rail 1630 km of road

		Baltica/E 67) - Helsinki to Warsaw.		
II	Germany, Poland, Belarus, Russia	(East-West) Berlin - Poznań - Warsaw - Brest - Minsk - Smolensk - Moscow - Nizhny Novgorod	rail, road	aprox. 2300 km of rail 2200 km of road
III	Germany, Poland, Ukraine	Brussels - Aachen - Cologne - Dresden - Wrocław - Katowice - Kraków - Lviv - Kiev	rail, road	1650 km of rail 1700 km of road
IV	Germany, Czech Republic, Austria, Slovakia, Hungary, Romania, Bulgaria, Greece, Turkey	Dresden/Nuremberg - Prague - Vienna - Bratislava - Győr - Budapest - Arad - Bucharest - Constanța / Craiova - Sofia - Thessaloniki / Plovdiv - Istanbul.	rail, road, ports	4379 km of rail 3640 km of road
V	Italy, Slovenia, Croatia, Hungary, Slovakia, the Ukraine and Bosnia and Herzegovina	(East-West) Venice - Trieste/Koper - Ljubljana - Maribor - Budapest - Uzhhorod - Lviv - Kiev.  Branch A: from the Bratislava (Slovakia) to Uzgorod (Ukraine); Branch B: from Budapest (Hungary) to Rijeka (Croatia); Branch C: from Budapest (Hungary) via Sarajevo (Bosnia-Herzegovina) to the port of Ploče (Croatia)	rail, road, ports	aprox.3270 km of rail 2850 km of road
VI	Poland, Czech Republic, Slovakia	(North-South) Gdańsk - Katowice - Žilina, with a western branch Katowice-Brno.  Branch A: from the Grudziadz (Poland) to Poznań (Poland), only by road; Branch B: from Częstochowa (Poland) to Brno (Czech Republic), by road and from Bielsko Biala (Poland) to Brno (Czech Republic), by rail	rail, road, ports	1800 km of rail 1880 km of road
VII	Austria, Bulgaria, Croatia, Germany, Hungary, Moldavia, Romania, Serbia, Montenegro, Slovakia, the Ukraine	(The Danube River) from Western to Eastern Europe through the Rhine, the Main and the Rhine-Main- Danube canal. Danube provides part of the link between the North Sea and the Black Sea;	inland water way and crosses	2415 km

VIII	Greece, FYR Macedonia, Bulgaria, Turkey, Albania, Italy	Durrës - Tirana - Skopje - Sofia - Plovdiv - Burgas - Varna-Constanța.	rail, road, ports	1270 km of rail 960 km of road
IX	Finland, Russia, Belarus, the Ukraine, Moldova, Romania, Bulgaria, Greece, Lithuania	Helsinki - Vyborg - St. Petersburg - Pskov - Moscow - Kaliningrad - Kiev – Ljubashevka / Rozdilna (Ukraine) - Chișinău - Bucharest - Dimitrovgrad - Alexandroupolis. A branch runs from Ljubashevka/Rozdilna to Odessa.  Branch A - Helsinki to St. Petersburg to Moscow; Branch B - Kaliningrad to Kiev; Branch C - Kaliningrad to Vilnius to Minsk	rail, road, ports	6500 km of rail and 5820 km of road
X	Austria, Slovenia, Croatia, Hungary, Serbia, Montenegro, Bulgaria, FYR Macedonia, Greece	Salzburg - Ljubljana - Zagreb - Beograd - Niš - Skopje - Veles - Thessaloniki.  Branch A: Graz - Maribor – Zagreb; Branch B: Budapest - Novi Sad – Beograd; Branch C: Niš - Sofia - Plovdiv - Dimitrovgrad - Istanbul via Corridor IV; Branch D: Veles - Prilep - Bitola - Florina - Igoumenitsa	rail, road	2529 km of rail 2300 km of road

*Source: own creation based on UNECE data.*

In certain areas, particularly those adjacent or linked to marine basins, it has been revealed that the corridor concept does not adequately meet needs. The more extensive approach of pan-European transport areas (PETras), which reflects the complex structure of the transport requirements in these regions, was therefore defined.

The areas concerned are:

**Barents Euro-Artic Area:**  
Multimodal transport area covering the northern provinces of Sweden, Finland and Norway as well as the Oblasts Murmansk and Arkhangelsk and the Republics of Karelia and Komi of the Russian Federation.

**Black Sea Transport Area:** Littoral countries of the Black Sea (Turkey, Georgia, Russia, the Ukraine, Romania, Bulgaria) as well as Greece and Moldova (observer status for Armenia

and Azerbaijan)

**Adriatic-Ionian Sea Transport Area:** Littoral countries of the Adriatic and Ionian Seas (Albania, Bosnia and Herzegovina, Croatia, Greece, Italy Slovenia, Serbia and Montenegro)

**Mediterranean Transport Area (MEDA countries):** Algeria, Cyprus, Egypt, Israel, Jordan, Lebanon, Malta, Morocco, Palestinian Territories, Syria, Tunisia and Turkey.

*Evolution towards Transnational Axes*

These development corridors and areas are distinct from the Trans-European transport networks (TEN-T), which include all major established routes in the European Union.

In order to establish a single, multimodal network that integrates land, sea and air transport networks throughout the Community, the

European policymakers decided to establish the Trans-European transport network, allowing goods and people to circulate quickly and easily between Member States and assuring international connections.

ERF believed European axes must be evaluated according to their capacity to offer anchorage with neighbouring countries, particularly in the Balkan Region and Mediterranean Basin which share clear socio-economic interests with the European Union.

The proposals have materialized into the 5 new Transnational Axes: Motorways of the Seas, Northern axis, Central axis, South Eastern axis and South Western Axis.

Whilst most of the Pan-European Corridors I, IV, V, VI and VII are now in the territory of the EU and thus part of a priority project of the trans-European transport networks, the remaining Corridors are covered by the proposed five axes as follows:

The four Pan-European Areas (Barents, Black, Ionian and Mediterranean Seas) are incorporated into the Motorways of the Seas as far as maritime connections are concerned.

Northern axis incorporates the PEC II and the northern part of PEC IX. It also includes a land connection to the Pan-European Area of Barents linking Norway through Sweden and Finland with Russia.

Central axis includes the PEC III and a branch of PECs V and IX.

South Eastern axis merges and extends the PECs IV and X, incorporates PECs VII and VIII as well as a branch of PEC V. The axis is further extended to the Middle East and it joins with TRACECA in Turkey, Armenia, Azerbaijan and Georgia.

South Western axis includes a land connection in the Pan-European Area of the Mediterranean.

Therefore, the Pan-European Corridors and Areas were designed to prepare on a step by step basis, the newest and future European Union

member states transportation infrastructure to correspond to the organization, quality and development level of western EU member states transportation system and policies in order to achieve a common standard within the European Union countries and neighboring countries across continent.

## **PROGRESS AND IMPACT OF DEVELOPING PAN-EUROPEAN CORRIDORS**

Since their definition at Crete and Helsinki Conferences in 1994 and 1997 until nowadays, the Pan-European Corridors have registered a considerable progress in implementation, but were also noticed many disparities in projects development within various European regions and different corridors. In order to analyze the global impact of Pan-European corridors development we should focus initially on the steps which were converted from official planning into real results, as improvement of transportation infrastructure.

### ***Progress on Pan-European Corridors investments***

Many projects and initiatives along the Pan-European Transport Corridors and Areas have been undertaken in order to maintain and improve the quality and capacity of the transport infrastructure. In addition, the European Union experienced the largest extension ever in 2004, encompassing ten new member countries, plus Romania and Bulgaria in January 2007. In this context, the role of the respective Transport Corridors and Areas as important transit and trade routes for freight and passenger traffic has grown significantly.

These multimodal corridors, the so-called Helsinki corridors, have an overall length of about 48,000 km, 25,000 km of which belong to the rail network and 23,000 km are part of the road network. Airports, sea and inland

ports, and main terminals serve as nodes for the transport modes along these long-distance connections between the Central and Eastern European countries.

The development of the corridors and regions had to comply also with the Community guidelines for the establishment of a Trans-European Transport Network.

For most of the corridors and regions, a **Memorandum of Understanding (MoU)** was signed by the transport ministers of the participating countries and the European Commission. Although it is only a **voluntary commitment** on the part of the participants and has no legal character, it demonstrates the intention of the partners to engage in joint efforts to develop the Pan-European Transport Network. These Memoranda of Understanding recommend, among other things, the setting-up of a Steering Committee which promotes the necessary activities and monitors their progress.

During the last ten years, reforms and investments projects in infrastructure were developed in all countries of the corridors region. While the starting points and present situation differs considerably from country to country, it is obvious that major gains were achieved through increased regional co-operation.

The progress registered alongside Pan-European corridors refers to various sectors and components of transportation system and describes especially developments made until 2004. There are many other projects on progress in various statuses (planning, feasibility study, expropriation, funds allocation etc) and for this reason we mention only some of the completed projects, in order to emphasize the targeted areas and improvements made to transportation infrastructure, within all corridors and for all means of transportations, as follows:

- *rehabilitation of road transport conditions:* in Slovakia for Beharovce – Branisko (7.77 km) and Branisko – Fricovce (6.23 km) sections (completed in 2004, for Corridor V, branch 5a); road upgrade in Kybartai-Klaipeda section (423 km) from Lithuania for Corridor IX, branch A (59 million Euro from EU grants)

- *upgrading of the motorway network:* motorway A15 (Spreewald junction - German/Polish border (Forst/Olszyna, 64.1 km, completed in 2004, 3145 million euros) by Germany for Corridor III

- *construction of new motorways:* motorway A4 in Poland from Nogowczyce to Batorego (52.9 km, completed in 2004 with ISPA and PHARE funds, totally 390 million Euro) for Corridor III; construction in Czech Republic of motorway D8 in Cinovec (German border)-Prague (93km, completed in 2008) for Corridor IV; Germany invested for Corridor IV on construction of motorways A17 Dresden-Czech Border (completed in 2006) and A6 Amberg/Ost-Pfreimd-Pleystein-Weidhaus (target date in 2009) in total length of 98,8 km, with totalizing costs of 902 millions Euro, supported by ERDF and national budget; motorway M3 in Hungary for section Polgar – Gorbahaza (12 km, completed in 2004, costs: 87 million Euro from state budget) for Corridor V; in Slovenia for Blagovica – Trojane section (8.2 km, completed in 2005, 199 million Euro) for Corridor V, main axis;

- *construction of cities bypass ways:* Poznań bypass in Poland (13.3 km, completed in 2003, for Corridor II, 1.74 million Euro); Czech Republic concentrated on Prague (82.5 km length) and Plzen bypass (completed in 2006) for Corridor IV.

- *construction of toll motorways:* Września – Konin in Poland (49.2 km, completed in 2002, Corridor II);

- *strengthening of road surface:* Sochaczew – Grojec in Poland (62 km,

2004, Corridor II, costs: 25 million Euro with 74.4% from ISPA)

- *upgrading of railway lines*: upgrade in Kybartai-Klaipeda section (537 km) in Lithuania for Corridor IX, branch A (total cost: 111 million Euro from which 55 million Euro from EU grants);
  - *refurbishment and modernization of existing railroad infrastructure*: in Croatia major overhauls were completed in 2004 for Dugo Selo – Krizevci (35, 7 km), Metkovic – Ploce (22.8 km) and Zagreb – Zdencina (24 km) sections of Corridor V, branches 5.b and 5.c;
  - *construction of new railway lines*: in Slovenia was completed in 2001 a new line at Hodos border crossing (Murska Sobota -Hodos, 30 km, costs: 97 million euro with non-EU funds) for Corridor V, main axis;
  - *modernisation of border crossing*:: construction of the access road to the Bulgarian/Greek border at Makaza (in progress, commissioning is planned for 2010), Nikopol-Turnu Magurele and Silistra-Calarasi border with Romania, Ilinden-Exochi on the border with Greece and Lesovo-Hamzabeyli on the border with Turkey (all completed) for Corridor IV.
  - *extension and modernization of ports*: Port of Rijeka in Croatia (completed in 2004, 60.5 million Euro) and Port of Koper in Slovenia (with non EU grants), both for Corridor V, main axis; Port of Durres in Albania, ferry and general development ; development of rail accesses from the Southern Branch of Black Sea Area to the main ports of the Ukraine - Odessa and Ilyichevsk, in Ukraine
  - *reconstruction, development and extension of airports*: eg. Skopje Airport in FYR Macedonia for Corridor VIII;
- In conclusion, all transportation sectors (road, railway, maritime and aerial) were developed by major investments made alongside Pan-European Corridors and Areas, while still many other projects exist in progress. Implementing these projects will provide more benefits to

transportation network as well as to entire economical and social life.

### ***Advantages of implementing Pan-European Corridors***

To analyze the effects of the Pan-European Corridors we must approach this subject starting from the objectives or goals which we consider that lead to the creation of such corridors. The objectives are time sensitive as it follows:

- long-term objective was the creation of integrated and fully operational Europe-wide networks constructed on the backbone of existing western transportation networks.
- middle-term objective referred to efficient connection and coordination between Trans-European Networks of the European Union, together with Pan-European corridors or priority Axis of the new member countries of Central-Eastern Europe and neighboring countries; so, a multilateral approach was required.
- short-term objective, regarding first 5 years, referred to the initiation of intense national investment projects on transportation and development of existing infrastructure, in partnership with neighboring countries, sometimes on European Union financing instruments and according to European Union proximate needs, especially the achievement of a competitive European economy.

This last goal was highlighted also, in 2008, within Lisbon Strategy as European Union main target is to become „the most dynamic and competitive knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion, and respect for the environment by 2010”.

Since the creation of Pan-European Corridors concept, in 1997, until present day, we could feel especially the effects on short-term, even important steps were also made to

achieve the middle term objectives, some of them were mentioned above.

The Pan-European Corridors must be considered especially as *an initiative to create a community spirit* between European countries (member states or candidates) and neighboring countries. A spirit focused on increasing economic transactions and growth, but also on supporting social exchange and cultural links, like free movement of people and transnational cooperation on cultural, social and political matters.

Step by step, we are starting to feel the effects, directly or indirectly, which the conceptualization and good implementation of Pan-European corridors have provided.

Firstly we can notice the benefits of *multimodal transportation*, a key element of Pan-European corridors. For example, large freight volumes can be transported by rail over long distances, while roads are used for local distribution. Another example is of passengers flying over long distances and entering a high speed train which travels from the airport directly to the town centre. In this way combined transport uses flexibility and speed of roads and airplanes plus the environmental advantages of railways and waterways.

Also through this multimodal transportation aspect of Pan-European corridors, *funds are re-directed also to develop some means of transportation which were neglected by investments over past years*, like railroads, in particular. For many years, the rail network suffered the effects of insufficient maintenance and lack of necessary repair. As a result, traffic is often delayed, the quality of service is inadequate and the conditions of travel are poor. For the past 20 years, financing has been inadequate for the maintenance of rail infrastructure and rolling stock. Estimates show that only one-fourth of necessary maintenance is actually carried out. Rail networks in the region are generally quite dense, as rail

constituted the principal means of freight and passenger transport under the previous regime, but since 1990 rail traffic was reduced to about one third.

The *assessment component*, represents another benefit, since each investment project for infrastructure development is designed to be subject to an environmental assessment, otherwise can not be implemented. This means that on the existing infrastructure in Western countries, which is very developed, important adjusting processes are required in order to reduce pollution levels because its current high status of development is providing also important negative effects on environment and social areas. So, the so called qualitative adjustments are required. But on the same time, on Central Eastern countries with poor and non-functional infrastructure exists a higher potential and opportunity to build ecological-friendly, fresh infrastructure, because each project is submitted to approval in accordance with the latest environmental standards. For example, each decision with respect to funding infrastructure projects, from the Union budget or from European Investment Bank, depends on the project's environmental assessments.

The *sustainability vision* is also enabling the states involved in Pan-European corridors, to analyze, select and develop their infrastructure components, system and policies, in complete harmonization with European Union vision of expansion, because their future trade and future economic development will be carried within this routes. So, Pan-European corridors are *a sustainable vision carrier*, which has a strategic impact on European Union overall development.

Another benefit is represented by the *connection component*, especially considered on West to East and North to South links. Such corridors are connecting the peripheral and less approachable regions to the central



parts of the Union. In fact, the Pan-European corridors are connecting Trans-European network, highly developed, to neighboring infrastructures, in poor conditions. These connections are allowing products and people to arrive faster and better to broader destinations, and international trade to increase.

A better connection and a developed infrastructure between states corresponding to Pan-European corridors are providing the *reduction of necessary time for transport* through the construction of high speed motorways in these corridors and through the rehabilitation of infrastructure in the rail transport. This will contribute also to the *harmonization of competing conditions among transport operators*, which will determine an increased level of satisfaction for its clients .

The Pan-European corridors are *offering a high level of mobility to people and businesses* throughout the continent. The availability of affordable and high-quality transport solutions contributes vitally to achieving the free flow of people, goods and services, to improving social and economic cohesion, and to ensuring the competitiveness of European industry.

As we can observe, each benefit is related to another, like a chain. A more fluid flow of products increases companies business level, turnover, market share and oblige them to travel alongside. This means that adequate infrastructure and adequate connections, can allow companies to expand their activities easier, by *direct investments* in other locations for manufacturing plants, distribution or sales and service agencies, for example. Western companies have opened many businesses in Central-Eastern Europe, in locations which correspond to such corridors, the most eloquent example for our case, being the establishment of Ford factory in Craiova, Romania. So, direct investments are increasing on locations

which are on or nearby Pan-European corridors.

### ***Weaknesses of Pan-European Corridors and Areas implementation***

By analyzing the status of progress of all the projects started within Pan-European Corridors and Areas, we noticed that in the majority of countries many delays or disturbances in execution exist. Also, there are important differences of progress in various countries and corridors, and even between countries within same corridor. The cause of these discrepancies we consider that underlie in the weaknesses which implementation of Pan-European corridors is providing. Some of these weaknesses are mentioned bellow, as follows:

- the no legal character of the Memoranda of Understanding;
- the MoU structure has been considered to be quite weak and dependent on the particular circumstances of each Corridor.
- the MoUs are also limited in their effect and extending the MoUs to cover even longer stretches or more countries would make these limitations even more apparent.
- planning and prioritisation of investments is in most cases done in a piecemeal fashion that follows national logic neglecting the needs of international movements along the whole axis. This often leads to implementing small projects and thus neglecting the environmental impacts ("salami slicing") of the overall programme at strategic and cross-border levels.
- unfortunately, instead of proceeding with caution, there is an atmosphere of competition among the countries of the region, all of whom are eager to get the biggest economic benefits out of the new corridors. There is also competition among railways and road builders as to which mode of transport is preferable;

- the focus is on infrastructure and insufficient attention is paid to removing non-infrastructure related to bottlenecks, which are often the primary cause for delays. Therefore, despite improvements of the infrastructure, delays persist, particularly at border crossings and for the rail mode, which suffers from the additional problem of non-interoperable national systems. For example, the average journey duration of a freight train between Berlin and Moscow on PEC II takes today some 12 days, mainly because of lengthy border-crossing procedures. The journey time could be reduced considerably, to maximum 3-5 days, by making border crossing procedures more effective and interoperable without costly infrastructure investments.

- there are no commonly agreed methodologies to assess the economic, social and environmental impacts of plans and projects along the Corridors that would meet the standards of best international practice. The appraisals are done according to national practices, which differ considerably between the countries concerned and which are not always in line with the EU legislation and best practice.

- such investments in corridors are damaging the environment: affect valuable ecosystems on islands and natural river banks, cause excessive noise and air pollution around construction areas, etc. The Ministers of Transport (ECMT) lists the need to protect the environment as being related to one of the "hurdles" that must be overcome in the implementation of transport policies in CEE, so protection of environment is seen has just a secondary importance for European and national officials.

The above described weaknesses in the development of the Pan-European Corridors and Areas are already apparent today. Despite the existing structures, coordination remains weak and the development plans of the Corridors address mainly

national bottlenecks, leading to the persistence of unnecessarily lengthy delays particularly at borders. Rail being more affected by these delays, shift from rail to road can also be expected with increasingly detrimental impacts on the environment and traffic safety.

### ***Pan-European Corridors and Areas – an opportunity for economic growth***

Before mentioned weaknesses and bad effects are results especially of poor implementation and planning. Political interest of each member state to attract more funds for investments project in infrastructure in mixture with an insufficient know-how to manage implementation of such projects (contracting, expropriation, supervision etc) has caused disturbances, losses and delays in some countries. Best example is represented by Romania.

One recent loss, due to poor implementation of investments in infrastructure in Romania, was the decision of Mercedes to invest in Hungary, instead of Romania, because Romania didn't have the required infrastructure for such important investment. Constantin Stroe, the deputy chief of Renault's Dacia plant in Pitesti and also Daimler's advisor in Romania declared that one of the arguments that had finally persuaded the car maker to opt for Hungary was: "the quality of infrastructure. An investment of this scale has to be close to at least two means of transport, road and rail. And the Hungarian site, Kecskemet, 80 kilometres (50 miles) southeast of Budapest, had access to both", while Romanian authorities could only just promise that by 2010 the area of Oradea would be linked to the border with a highway.

So, the Pan-European corridors had provided many benefits only to those countries which were able to manage large amounts of funds and simultaneous projects in infrastructure,

taking into consideration both national and European interests and priorities. It is highly important not to focus on attracting too much direct money but to attract indirect money like direct investments, which increase trade flows and provide a solid economic growth.

Therefore depends on each country capability to obtain as many positive results from this opportunity, which Pan-European corridors really represent, and to develop internal infrastructure to European standards and to obtain many economic benefits.

Pan-European corridors are representing a Win-Win situation, where each party which respects the mutual interest has to win. European Union expands on efficient infrastructures and can achieve a balanced and stabilized economy status, as well economic, social and political development. While corridors countries can synchronize their policies and economies to European Union standards, they can consolidate economical and political relations with neighboring countries and they can increase their efficiency in all transportation sectors, as main benefits.

## **CONCLUSIONS AND SOLUTIONS**

The position of the countries of Central and Eastern Europe, between the Western European countries and the Commonwealth of Independent States and between Nordic and Balkan countries, generated the necessity of creating and exploiting an effective network of transport infrastructure and transport services, adapted to EU standards. The aim of these countries to strengthen the links with the EU also pushes the development of this network, combining infrastructure and services. In this context, the existing incongruity regarding the institutional framework established for the network had to be adapted, and the result were the Pan-European Corridors and Areas.

The integration of the Centre, Eastern and South-Eastern European

countries' infrastructure in the European transport networks had as a main goal the promotion of networks' interconnection and interoperability. This was done through concentrating upon some specific infrastructure routes located on the trajectory of 10 pan-European transport corridors, which pass through geographical zones in many countries, some of them EU members, and others undergoing a process of negotiation (Turkey).

The European Union has acquired a continental dimension due to last years enlargements and its transportation network needs have increased substantially. Therefore, coordinated transportation policies and investments in infrastructure within European Union are becoming a key aspect for efficient integration of new member states in the existing transportation network, policies and system. For this reason, the Pan-European corridors and Areas have represented preliminary guidelines to be followed by new member states, candidate states and neighboring countries, in order to achieve the appropriate development and support for all kind of activities which this greater European Union will involve.

The advantages of the Pan-European corridors mainly refer to the creation of optimal conditions for providing transport services; the promotion of a common and efficient road transport system; the contribution to the harmonization of competing conditions among transport operators; the encouragement of the rules observance regarding work conditions in this sector; the reduction of necessary time for transport through motorways in these corridors and through the rehabilitation of the infrastructure in the rail transport; a higher travelling safety.

All these will immediately have the following effects: the growth of investments in infrastructure thanks to European funds - for developing

countries, this will represent an important part as it welcomes a development of the economy, especially in crises; the favouring of conditions for the functioning and administration of globalization; the growth of cooperation both among Eastern countries and between such countries and Western countries; conditions for the recovery of economic differences between West and East; conditions for the recovery of the development in accordance with the policy of European countries and other candidate countries.

Improving transport infrastructure in the region and integrating the countries of Central Eastern Europe to the rest of Europe is important in order to support better quality of life through economic growth, regional integration, social cohesion and adequate environmental conditions.

Nowadays, the European Union strategic actions on transportation and the Pan-European Corridors development projects are in front of a major bottleneck: the international financial crisis. So, beside the internal obstacles in implementing investment projects, such as: lack of coordination between member states, poor management of national priorities and project budgets, delays in execution due to inadequate negotiation or election of construction companies and the imminent social, economical and environmental bad effects, there is also an external factor which is disturbing and damaging the funding activity, a core part of any project. The global financial crisis has caused a stand-by and reconsidering climate for all development projects within all European member states and neighbouring countries, in any field not only in transportation. National governments, European institutions and economical entities are struggling to adapt, to reduce and to overpass the current financial difficulties, especially in obtaining funds. In other words, nowadays, main attention is focused on

finding suitable measures to obtain an efficient usage of current resources in order to maintain current activities at current parameters, so development projects are on a secondary level. But the financial crisis should be seen mainly as a transitory process, whilst evolution targets should be well defined.

The most important aspect which must be considered is that the current crisis can provide also a sufficient time for analysis and improvement of current strategies, policies and directions. It is clear that the Pan-European corridors have reached their target: to trigger a common approach and vision on transportation within all European member states and neighbouring countries. Therefore implementation is just a problem of managing priorities and finding best solution to save time, money and to reduce bad effects. So, all the actors involved in implementing and developing the Pan-European Corridors have nowadays enough time to take a good "breath of fresh air" to find newer and better solutions.

Regarding implementation of Pan-European Corridors, as a first step for a harmonized transportation system alongside European continent and neighbouring countries, we can mention several solutions which can contribute to a correction and improvement of current situation, like:

*a. Connecting the EU to neighbouring countries*

To make sure that the EU and its neighbours establish the modernised transport connections they need, the EU's major axes of the trans-European networks have to be linked up with the transport networks of neighbouring countries. Physical and technical connections between and along major transport axes must be improved.

The European Commission's January 2007 communication to the Council identifies five major trans-national transport axes. It is important to focus on a limited number of such key trans-national connections to

ensure that the inevitably scarce resources available stimulate trade and economic growth both in the EU and in the neighbouring countries. Development of these key pathways will contribute to efficient and smooth traffic flows across the European continent and beyond.

*b. Need for modernisation*

Neighbouring countries will only be able to take full advantage of closer relations with the EU and improved access to its market if their transport sectors can handle today's complex transport flows. Trade between EU and non-EU countries can only reach its full potential if the transport links over road, rail, air and water are of good quality and systems are interoperable, safe and secure.

Recent studies forecast continued rapid growth in trade flows and freight transport. Strong growth is predicted in trade between the enlarged EU and the neighbouring countries, in particular with Turkey and Russia. Overall, traffic volumes between the EU and the neighbouring countries are expected to grow by more than 100% between 2000 and 2020.

However, the existing coordination structures for transport connections between the enlarged EU and its neighbours do not take into account the EU's enlargement process, nor do they reflect today's transport demands. Therefore, they need to be modernised. This means looking at key transport axes - core cross-continental routes - to ensure efficient flows of traffic and goods.

*c. Harmonisation of policies and investments in non-infrastructure*

For the axes to work effectively, it will not just be a question of building up the physical infrastructure but also in particular of taking complementary steps to reduce delays.

In many cases, obstacles and bottlenecks occur, especially at borders, due to a lack of policy and administrative interoperability and

harmonisation. Common market rules that reflect the best international practice are important for the development of international trade and the effective implementation of the priority axes and projects. *Technical interoperability* is a key element facilitating cross-border traffic and a major factor in the reduction of equipment costs. At the same time, transport infrastructure should also be supported by efficient, integrated traffic management systems.

Some of the *transport barriers* are related to administrative and border control procedures, such as slow customs clearance, visa procedures, language barriers and safety and security deficits. They result in lost time and reduced profits, which increases prices for transported goods, and restricts business travel and tourism. Such delays may also encourage the use of alternative, longer routes. Ultimately, this will affect economic development.

*d. Horizontal measures proposed by European Commission*

In order to remove or reduce such obstacles and bottlenecks, the European Commission proposes a series of horizontal measures to make transport along the axes more rapid and effective. These measures aim at gradually harmonising the neighbouring countries' legislation and policies with the relevant *acquis communautaire*, or body of EU law. They concern all modes of transport, and include:

- ensuring technical, legal and administrative interoperability with systems in the EU as regards, for example, railway networks, signalling systems and infrastructure charging schemes;
- speeding up border-crossing procedures by implementing the relevant international conventions, and by introducing 'one-stop' offices through shared facilities and simplification and harmonisation of documentation in line with EU practice;

- implementing new technologies like traffic management and information systems in all modes of transport - notably the European Rail Traffic Management System (ERTMS), the European air traffic control infrastructure modernisation programme (SESAR) and the Galileo satellite navigation system - that are effective and compatible with those implemented in EU territory;
- taking measures to improve safety, security and working conditions in all transport modes, for example through harmonisation of standards and procedures at the highest level of performance;
- applying international conventions, social and environmental assessment, and public procurement rules in accordance with EU standards, donors' funding rules and best international practice.

#### *e. Cooperation for coordination*

In addition to infrastructure, non-infrastructure and horizontal measures, efficient coordination of actions and investments along the five major axes will be essential for their good functioning. Coordination makes it easier to synchronise investments, plan cross-border projects, and eliminate barriers to transport flows.

Regional and bilateral cooperation is already strong part of EU transport policy. For candidate and potential candidate countries, the aim is gradual alignment with the *acquis communautaire*. Under the ENP, the EU has bilateral action plans with many partner countries, working together to increase transport efficiency, safety and security. The aim is to ensure that partners' legislation, standards and technical specifications are compatible with those of the EU.

Cooperation with Russia in transport is pursued under the EU-Russia dialogue launched in 2005. The western Balkan countries and the European Commission signed in December 2006 a resolution

underscoring their political commitment to developing the principal south-east European regional core transport network. In the Mediterranean region, a regular and intensive policy dialogue was established through the Europe-Mediterranean transport forum. The first Euro-Mediterranean transport ministerial conference in December 2005 adopted the transport priorities for the region and mandated the forum to adopt a regional transport action plan as the basis for implementing these priorities in the next five years.

The implementation of the TRACECA (transport corridor Europe-Caucasus-Asia) strategy and the 'Baku process' - the Caspian and Black Sea cooperation that brings together the TRACECA countries, Russia and Belarus - and plans for a Mediterranean regional transport action plan complement the bilateral action plans that the EU has with partner countries.

The development of the five trans-national axes should build on these existing regional cooperation initiatives on transport. It should also be closely coordinated with organisations developing international transport corridors - like TRACECA, trans-African networks, and networks linking Europe with Asia developed by the United Nations and the European conference of ministers of transport.

Whilst these regional cooperation frameworks already address many of the horizontal measures, there is a need to look at them in conjunction with infrastructure development along the major trans-national axes. This is to ensure that the most important bottlenecks along an axis are addressed in a synchronised and timely manner and that the different procedures and standards are compatible along the whole axis used by international transport to and from the EU.

The five trans-national transport axes proposed by the European Commission are the result of a major

strategic reflection on the future transport priorities for the EU and its neighbourhood. The axes will be crucial to ensuring that the EU and neighbouring countries enjoy smooth transport links and therefore develop their economies and trade, acting as an overarching framework for developing obstacle-free movement for all modes of transport. They also include some branches in regions where traffic volumes are relatively low due to political problems, aiming therefore to strengthen regional cooperation and integration in the longer term.

The axes cover a vast range of territory in all directions of the compass – across European continent from Morocco in North Africa to Russia in the east, from warm shores of Mediterranean in the south to chilly waters of the Barents in the north, and stretching also to some of the EU's most remote area like Canary Islands and the Azores.

Commercial and informational exchanges within European Union are nowadays very intense. Enlargements perspectives of this area are supporting the idea of an expansion beyond the borders of old continent. The future Europe will have strong relations with the former soviet and Asiatic area, in which large networks and corridors for transportation will decide the economic and social future of such zones. There is an aerial transportation at global level, almost fully interoperable, an unique road transportation system for entire planet is being under configuration and there are ideas about a railroad where trains to travel on continents from a side to the other. A new system starts to take shape, a system in which the concept of interoperability is essential. The actual transportation systems are re-designed according to such concept.

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